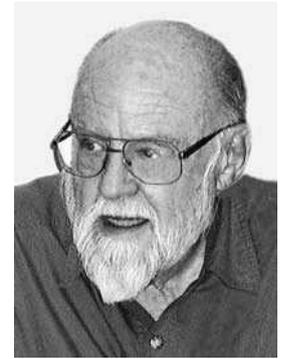


# Editorial

## Cochlear Implants and FM Systems

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The pace at which the benefits provided by cochlear implants continues to escalate can hardly be overstated. In less than three decades, cochlear implants have progressed, from little more than aids-to-lip reading, to a level of sophistication permitting open set recognition of words and sentences. It was only a matter of time before cochlear implant technology joined forces with another enhancement in amplification, the personal FM system.

In this issue of *JAAA*, authors Jace Wolfe and Erin Schafer, of the Hearts for Hearing Foundation and the University of North Texas, respectively, present results of a study examining the efficacy of connecting a personal FM system to a cochlear implant, in order to improve speech recognition when the input to the cochlear implant is at a low level. They tested 12 cochlear implant users with a linked FM system, either turned on or off, at two input levels, 50 and 65 dBA, and at two audio mixing ratios, 30/70 (30% from the cochlear implant and 70% from the FM system) and 50/50. Speech test materials were CNC lists and the HINT test.

Given the value of FM systems as adjuncts to conventional aids, it is not unexpected that the

investigators found substantial benefit in speech recognition performance when the FM system was coupled to the cochlear implant, but only at the comparatively low speech input level of 50 dBA. At the 65 dBA input level, the FM system provided little additional benefit, but at the lower level, performance on CNC word lists increased from 13 to 54% for the 30/70 ratio, and from 36 to 59% for the 50/50 ratio. When the HINT test was administered at 65 dBA and an S/N ratio of +5 dB, performance increased from 30 to 70% at the 50/50 ratio, and from 53 to 82% for the 30/70 ratio. The authors note that these results affirm the potential value of the FM system in situations like public lectures where the speaker may rove about the room, thus varying the already low level of input to the cochlear implant.

Results like these emphasize the importance of coupling systematic research on amplification systems with an innovative approach to solving the real-world problems of their users.

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